

Work Order ID 65175

January 7, 2011 8:23:22 AM



Page 1

Item ID: D6101-003

Accept



Setup Start



Revision ID:

Stop



Item Name: Saddle Billet, 7075

Start Date: 1/07/11 Start Qty: 10.00



Cust Item ID:

Required Date: 1/21/11 Req'd Qty: 10.00



Customer:

Reference:

Approvals: Process Plan: CL

Date: 1/10/107

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D6101	Rev B								

100

0.00



PURCHASING

Purchasing

Memo

0.00

Issue P/O: 13235

a) Description: Alluminum billet

b) 7.875" x 6.250" x 2.00" thick

c) Tolerance on all dimensions are +0.030"/-0.000"

d) Grain direction along 7.875" length

e) Material: 7075-T7351 (QQ-A-250/12)

f) Material certification required

CL 1/10/107 (10)

110

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Memo

0.00

Ensure material certification is attached

CL 1/10/19 (70)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			






NOTE: Date & initial all entries



Work Order ID 65175




January 7, 2011 8:23:22 AM



Page 2

Item ID: D6101-003 Accept  Setup Start 
Revision ID: Stop 
Item Name: Saddle Billet, 7075
Start Date: 1/07/11 Start Qty: 10.00  Cust Item ID:
Required Date: 1/21/11 Req'd Qty: 10.00  Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start 
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop 

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120  QC Quality Control	QC6- Inspect dimensions to drawing Memo Ensure Material certification comply to Dwg D6101	0.00 0.00	SL	11/01/26		(10)			
130  Packaging Packaging	Identify as per dwg & Stock Location: MAT42 Memo	0.00 0.00	SL	11/01/26		(10)			
140  QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							11/01/26 DJ CL 11/01/26

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

January 7, 2011 8:23:22 AM

Page 1

Work Order ID: 65175



Parent Item: D6101-003



Parent Item Name: Saddle Billet, 7075


Start Date: 1/07/11

Required Date: 1/21/11

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP A: ☐01.05.04 ☐New Issue ☐EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6101-003P  7075-T7351 2X6.25X7.875		Purchased	No			110	Each	0.0000	1	10		1/11/11	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

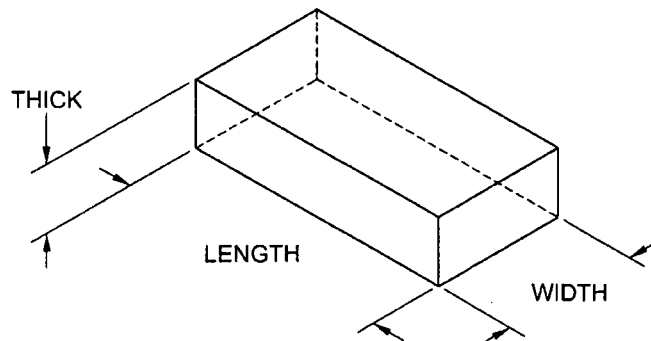
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

SPECIFICATION CONTROL DRAWING



CL 11/10/07
W/O. 65175

PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

RELEASED
09/07/15/W

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED		DRAWING NO. REV. B	
MFG. APPR.		D6101 SHEET 1 OF 1	
APPROVED		TITLE SCALE	
DE APPR.		SADDLE BILLET, 7075 NTS	
DATE	09.04.23	<small>COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PURCHASE ORDER

Purchase Order ID PO13235

Purchase Order Date 1/07/11

PO Print Date 1/07/11

Page Number 1 of 2

Order From : VC-MET001
METAUX CASTLE
A.M. CASTLE & CO. (CANADA) INC. - BOX B9204 PO BOX 9100
TORONTO, ON M4Y 3A5
CA

Contact Name		Buyer	Chantal Lavoie
Vendor Phone	514 694 9575	Requisition Nbr	
Vendor Fax	514 695 3281	Tax Resale Nbr	10127-2607
Vendor Account Nbr		Terms	Net 30
		Currency	CAD
		FOB	Destination-Collect

Ship To : DART AEROSPACE LTD 1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

FAXED
1/11/11

e-mail memo

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
D6101-003P		7075-T7351 2X6.25X7.875	1/11/11 Yes	20.00 Each	Yours ppd	\$59.1600	\$1,183.20
		Special Inst: AS PER DWG D6101 REV. B B65151 MATERIAL: 7075-T7351 (QQ-A-250/12) SIZE: 7.875" X 6.250" X 2.00" THICK GRAIN DIRECTION ALONG 7.875" LENGTH TOLERANCE ON ALL DIMENSIONS ARE + 0.030" / -0.000" PLEASE SHIP ASAP					
D6101-003P		7075-T7351 2X6.25X7.875	1/21/11 Yes	10.00 Each	Yours ppd	\$59.1600	\$591.60
		Special Inst: MATERIAL & SIZE AS ABOVE B65175					
D6104-005P		17-4 SS Roundbar 4.00"OD	1/21/11 Yes	10.00 Each	Yours ppd	\$76.0000	\$760.00

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

Change Nbr: 1

Change Date: 1/07/11

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP

Page 1 of 1

Shipment No:644226

Ship From: Castle Metals MONTREAL 835-SELKIRK AVENUE POINTE CLAIRE, QUEBEC H9R 3S2		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA			
Date Shipped 18-JAN-11		F.O.B. ORIGIN		Freight Terms Prepaid		Carrier MANITOULIN		BOL No 644226-2	

Shipment Details		Final Destination Branch - MON	
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Order No 1204443		Line No 1		Item No 752237.MO		Description 2.0000.PL.7075.T7351.ALUMINUM.US1.48.5000.144.5000 CUT 2SIDED TO 6.25 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 7.875")) X 7.875 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 7.875")) - ALUMINUM PLATE SAW SPECIFICATIONS: QQ-A-250/12									
Purchase Order No 13235		Part Number YOUR ITEM NUMBER: D6101-003		Ordered Qty 10 PCS			Invoice Qty 10 PCS								
Details		Mill		Heat Number		Mech Id		PCS		Width (IN)		Length (IN)		Shipped Qty (LBS)	
Delivery No. 64540328				506772A3				10						101.61	

These commodities/technologies are subject to US Export Administration & US State Dept. Regulations and, if intended for export, were/are exported thereunder. Diversion contrary to US Law is Prohibited.

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Reviewed by Authorized Castle Metals Representative:

Date:

SHIP TO:

A M CASTLE & CO
3400 NO. WOLF ROAD
FRANKLIN PARK, IL 60131

KAISER ALUMINUM

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

SOLD TO:

AM CASTLE & CO- SOLD TO
3400 NO. WOLF ROAD
FRANKLIN PARK, IL 60131

Serial Number

4193016

CUSTOMER PO NUMBER: 45811		WORK PACKAGE:	CUSTOMER PART NUMBER: 6857 AMC A97075-160		SHIP RUN/LOAD: 101791/19	GOV'T CONTRACT NUMBER:	
KAISER ORDER NO: 1096361	LINE ITEM: 1	SHIP DATE: 7-MAY-2010	ALLOY: 7075	CLAD: BARE	TEMPER: T7351	PRODUCT DESCRIPTION: Sawed Plate	
WEIGHT SHIPPED: 8224 LB	QUANTITY: 6 PCS EST.	B/L NUMBER: 2027222		GAUGE: 2.0000 IN	DIAMETER/WIDTH: 48.500 IN	LENGTH: 144.500 IN	

Certified Specifications

AMS 4078/RevG
ASTM B 209/Rev07
BSS 7055/RevA
DPS 4.713/RevAH
MMS 159/RevN

AMS-QQ-A-250/12
ASTM B 594/Rev06
CMMP 025/RevS
GAMPS 9101/RevB
PS 21211/RevK

AMS-STD-2154
BAC 5439/RevH
CSTI 006/RevC
GSS16100/RevG/Amd1

Test Results

Test Code: 4297

Lot: 506772A3 Cast 314

Drop 04

Ingot 2

(ASTM E8/B557)

(EN 2002-1)

Tensile: Temper
T7351

Dir / # Tests
LT / 2 (Min:Max)

Ultimate KSI (MPA)
72.5 : 72.6
(500 : 501)

Yield KSI (MPA)
61.3 : 61.8
(423 : 426)

Elongation %
12.5 : 13.3

(ASTM E1004)

(EN 2004-1)

Conductivity %IACS :
(MS/M) :

41.3 Min
24.0 Min

41.9 Max
24.3 Max

(ASTM E1251)

Chemistry:
Actual

SI
0.09

FE
0.17

CU
1.4

MN
0.04

MG
2.4

CR
0.20

ZN
5.5

TI
0.04

V
0.01

ZR
0.01

TOT

OTHER
0.05

**KAISER
ALUMINUM**

Trentwood Works - Spokane, WA 99215
Phone: (800) 367-2586

CERTIFIED TEST REPORT

Serial Number
4193016

ALLOY LIMITS

	SI	FE	CU	MN	MG	CR	ZN	TI	V	ZR	OTHER	MAX
Chemistry:											EACH	0.05
7075 MIN	0.00	0.00	1.2	0.00	2.1	0.18	5.1	0.00	0.00	0.00	TOT	0.15
MAX	0.40	0.50	2.0	0.30	2.9	0.28	6.1	0.20	0.05	0.05		

Aluminum Remainder

TEST NOTES

7075-T7351 plate 3.501-4.000" thick, if
ultrasonically inspected, meets requirements of CMMP025 per
SDR CMMP025-KaiserT-3. 7075-T7351 plate 4.001-5.000" thick,
if ultrasonically inspected, meets requirements of CMMP025
per
SDR CMMP025-KaiserT-2.

Metal represented by this test report was immersion
ultrasonically tested from one side and meets the Class A
and Class B requirements of all specifications referenced
on this test report.

Castle Metals FP

HEAT NUMBER 506772 A3
MECHANICAL ID _____
ITEM CODE 6857
LOT NUMBER _____
PO NUMBER 45811
RECEIPT DATE 5-11-2010
SUPPLIER KAISER
SPECIFICATION _____
LCS NO
COMMENT _____
APPROVED BL

CERTIFICATION

KAISER ALUMINUM FABRICATED PRODUCTS, LLC (KAISER) HEREBY CERTIFIES THAT METAL SHIPPED UNDER THIS ORDER WAS MELTED IN THE UNITED STATES OF AMERICA OR A QUALIFYING COUNTRY PER DFARS 225.872-1(b), WAS MANUFACTURED IN THE UNITED STATES OF AMERICA, AND MEETS THE REQUIREMENTS OF DFARS 252.225 FOR DOMESTIC CONTENT. THIS MATERIAL HAS BEEN INSPECTED, TESTED, AND FOUND IN CONFORMANCE WITH THE REQUIREMENTS OF THE APPLICABLE SPECIFICATIONS AS INDICATED HEREIN. ALL METAL WHICH IS SOLUTION HEAT TREATED COMPLIES WITH AMS 2772. ANY WARRANTY IS LIMITED TO THAT SHOWN ON KAISER'S STANDARD GENERAL TERMS AND CONDITIONS OF SALE. TEST REPORTS SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF KAISER ALUMINUM FABRICATED PRODUCTS, LLC LABORATORY. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW, ISO-9001:2000 CERTIFIED.

BILL POYNOR, LABORATORIES SUPERVISOR

Bill Poy